



Complete Summary

TITLE

Chronic kidney disease (CKD): percentage of patients aged 18 years and older with a diagnosis of advanced CKD (stage 4 or 5, not receiving RRT), and hypertension and proteinuria who were prescribed ACE inhibitor or ARB therapy during the 12 months reporting period.

SOURCE(S)

Renal Physicians Association, Physician Consortium for Performance Improvement®. Chronic kidney disease physician performance measurement set. Chicago (IL): American Medical Association; 2007 Oct. 32 p. [13 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of patients aged 18 years and older with a diagnosis of advanced chronic kidney disease (CKD) (stage 4 or 5, not receiving renal replacement therapy [RRT]), and hypertension and proteinuria who were prescribed angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) during the 12 months reporting period.

RATIONALE

Evidence has shown that use of angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs) as antihypertensive therapy is effective, and may help slow the progression of chronic kidney disease (CKD). These drugs help control hypertension and decrease proteinuria. However, data shows that

only approximately one-third of patients with CKD are treated with an ACE inhibitor or an ARB.*

*The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

If a patient has glomerular filtration rate (GFR) less than or equal to 30 ml/min/1.73m² and hypertension, then s/he should receive an ACE inhibitor or an ARB as a first-line agent. (Renal Physicians Association [RPA], 2002)

ACE inhibitors and ARBs can be used safely in most patients with CKD. ACE inhibitors and ARBs should be used at moderate to high doses, as used in clinical trials. (National Kidney Foundation [NKF], 2004)

ACE inhibitors and ARBs have not been tested in all types of CKD. Where tested, ACE inhibitors and ARBs have generally similar effects on blood pressure, urine protein excretion, and slowing the progression of kidney disease. (NKF, 2004)

PRIMARY CLINICAL COMPONENT

Chronic kidney disease (CKD); angiotensin converting enzyme (ACE) inhibitor; angiotensin receptor blocker (ARB); hypertension; proteinuria

DENOMINATOR DESCRIPTION

All patients aged 18 years and older with a diagnosis of advanced chronic kidney disease (CKD) (stage 4 or 5, not receiving renal replacement therapy [RRT]) and hypertension and proteinuria (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Patients who were prescribed angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy during the 12 month reporting period

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [K/DOQI clinical practice guidelines on hypertension and antihypertensive agents in chronic kidney disease.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Overall poor quality for the performance measured
Use of this measure to improve performance

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Kinchen KS, Sadler J, Fink N, Brookmeyer R, Klag MJ, Levey AS, Powe NR. The timing of specialist evaluation in chronic kidney disease and mortality. *Ann Intern Med* 2002 Sep 17;137(6):479-86. [PubMed](#)

McClellan WM, Knight DF, Karp H, Brown WW. Early detection and treatment of renal disease in hospitalized diabetic and hypertensive patients: important differences between practice and published guidelines. *Am J Kidney Dis* 1997 Mar;29(3):368-75. [PubMed](#)

U.S. Renal Data System. USRDS 2006 annual data report: atlas of end-stage renal disease in the United States. Bethesda (MD): National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases; 2006.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement
National reporting

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Physician Group Practices/Clinics

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All patients aged 18 years and older with a diagnosis of advanced chronic kidney disease (CKD) (stage 4 or 5, not receiving renal replacement therapy [RRT]) and hypertension and proteinuria

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All patients aged 18 years and older with a diagnosis of advanced chronic kidney disease (CKD) (stage 4 or 5, not receiving renal replacement therapy [RRT]) and hypertension and proteinuria

Exclusions

- Documentation of medical reason(s) for not prescribing angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy
- Documentation of patient reason(s) for not prescribing ACE inhibitor or ARB therapy

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Encounter

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients who were prescribed angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) therapy during the 12 month reporting period

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Measure #2: ACE inhibitor (ACE) or angiotensin receptor blocker (ARB) therapy.

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement® Measurement Sets](#)

MEASURE SET NAME

[Chronic Kidney Disease Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the Renal Physicians Association and the Physician Consortium for Performance Improvement®

DEVELOPER

Physician Consortium for Performance Improvement®
Renal Physicians Association

FUNDING SOURCE(S)

Unspecified

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FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

INCLUDED IN

Ambulatory Care Quality Alliance
Physician Quality Reporting Initiative

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2007 Oct

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

Renal Physicians Association, Physician Consortium for Performance Improvement®. Chronic kidney disease physician performance measurement set. Chicago (IL): American Medical Association; 2007 Oct. 32 p. [13 references]

MEASURE AVAILABILITY

The individual measure, "Measure #2: ACE Inhibitor (ACE) or Angiotensin Receptor Blocker (ARB) Therapy," is published in the "Chronic Kidney Disease Physician Performance Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on March 27, 2008. The information was verified by the measure developer on June 11, 2008.

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